

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>28185 - 502 - 061</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB2004/002980</b>	International filing date (day/month/year) <b>09/07/2004</b>	(Earliest) Priority Date (day/month/year) <b>12/07/2003</b>
Applicant  <b>RADIATION WATCH LIMITED</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 3

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

Inter national Application No  
PCT/GB2004/002980A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G01T1/24

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G01T

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/063339 A (CARIA MARIO RAIMONDO ; SMITH KENWAY MONTGOMERY (GB); UNIV GLASGOW (GB)) 15 August 2002 (2002-08-15) the whole document	9-19, 23, 24, 26, 31-33
Y		21, 22
A		1-8, 25, 27-30
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

12 January 2005

Date of mailing of the international search report

27. 01. 2005

Name and mailing address of the ISA

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Coda, R

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2004/002980

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SCHWARZ C ET AL: "Measurements with Si and GaAs pixel detectors bonded to photon counting readout chips" NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH, SECTION - A: ACCELERATORS, SPECTROMETERS, DETECTORS AND ASSOCIATED EQUIPMENT, NORTH-HOLLAND PUBLISHING COMPANY. AMSTERDAM, NL, vol. 466, no. 1, 21 June 2001 (2001-06-21), pages 87-94, XP004251280 ISSN: 0168-9002 page 87, paragraph 1 - page 88, paragraph 3	9,10, 13-16, 18-20, 23,24, 26,31
A	-----	1-8,25, 27-30
X	US 5 812 191 A (SARAKINOS MILTIADIS EVANGELOS ET AL) 22 September 1998 (1998-09-22) column 2, line 27 - column 6, line 19 column 11, line 15 - column 12, line 26 column 14, line 35 - column 15, line 17 figures 1,2,8,10	23
Y	-----	21,22
A	EISEN Y: "Current state-of-the-art industrial and research applications using room-temperature CdTe and CdZnTe solid state detectors" NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH, SECTION - A: ACCELERATORS, SPECTROMETERS, DETECTORS AND ASSOCIATED EQUIPMENT, NORTH-HOLLAND PUBLISHING COMPANY. AMSTERDAM, NL, vol. 380, no. 1-2, 1 October 1996 (1996-10-01), pages 431-439, XP004206359 ISSN: 0168-9002 the whole document	1-8, 27-33
X	----- US 2003/069002 A1 (HUNTER CHARLES ERIC ET AL) 10 April 2003 (2003-04-10) the whole document	34-52
X	----- US 5 986 276 A (LABRIOLA II DONALD P) 16 November 1999 (1999-11-16) column 2, line 66 - column 3, line 5 column 4, line 27 - column 5, line 67 ----- -/--	34-36, 46,47

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB2004/002980

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 6 100 806 A (GAUKEL JOHN J) 8 August 2000 (2000-08-08)</p> <p>column 5, line 56 - column 6, line 47 column 7, line 20 - column 9, line 32 column 11, line 13 - column 14, line 59 column 19, line 59 - column 20, line 44 -----</p>	<p>34, 37-42, 44,45</p>

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-33

An assembly and a method for monitoring ionising radiation having: a detector substrate for generating electronic charge in response to incident ionising radiation, the detector having an array of sense volumes; a circuit substrate supporting readout circuits corresponding to the sense volumes, each circuit being switchable between two charge integration modes, the first one arranged to sense a single ionising radiation event and the second one arranged to sense a plurality of ionising radiation events. Moreover the circuits have a photon counting circuitry responsive to events having first and second energy range.

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2. claims: 34-52

A system and a method for remote monitoring of ionising radiation having at least one monitoring device including a communication unit for communicating the radiation data over a communication network and a control station to receive this radiation data. A possible hazardous radiation is detected by analysing the radiation spectroscopic data.

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB2004/002980

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

As a result of the prior review under R. 40.2(e) PCT,  
no additional fees are to be refunded.

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB2004/002980

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02063339	A	15-08-2002	EP 1358509 A1	05-11-2003
			WO 02063339 A1	15-08-2002
			JP 2004530864 T	07-10-2004
			US 2004096031 A1	20-05-2004
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US 5812191	A	22-09-1998	GB 2289979 A	06-12-1995
			GB 2289981 A	06-12-1995
			GB 2289983 A , B	06-12-1995
			AT 172343 T	15-10-1998
			AU 691926 B2	28-05-1998
			AU 2672095 A	21-12-1995
			CA 2191100 A1	07-12-1995
			CN 1155955 A , B	30-07-1997
			DE 69505375 D1	19-11-1998
			DE 69505375 T2	08-04-1999
			DK 763302 T3	23-06-1999
			WO 9533332 A2	07-12-1995
			EP 0763302 A2	19-03-1997
			EP 0854643 A2	22-07-1998
			EP 0854644 A2	22-07-1998
			EP 0853427 A2	15-07-1998
			EP 0854639 A2	22-07-1998
			ES 2123991 T3	16-01-1999
			FI 964728 A	02-12-1996
			GB 2289980 A	06-12-1995
			HK 1014819 A1	18-08-2000
			IL 113921 A	15-04-1997
			JP 10505469 T	26-05-1998
			NO 965104 A	03-02-1997
			NZ 287868 A	24-04-1997
			US 2003164888 A1	04-09-2003
			US 6035013 A	07-03-2000
			US 2001002844 A1	07-06-2001
			US 2002089595 A1	11-07-2002
<hr/>				
US 2003069002	A1	10-04-2003	NONE	
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US 5986276	A	16-11-1999	NONE	
<hr/>				
US 6100806	A	08-08-2000	US 6072396 A	06-06-2000
			WO 03060549 A1	24-07-2003
			US 6337665 B1	08-01-2002
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